

What Is Claimed Is:

1. In a tire inflation system for a vehicle having at least one axle with at least one pneumatic tire mounted on a hub cap for rotation about the axle end and a source of pressurized air carried by the vehicle for supplying air to the interior of the axle and then to the hub to inflate the tire, the improvement comprising:

a first rotary union member mounted on the end of the axle and having a first elongate opening therethrough and with a first seal ring carried thereabout;

a second rotary union member mounted on said hub cap and having a second elongate opening therethrough in general alignment with the first opening and with a second seal ring carried thereabout; and

a flexible tube having a first end extending into said first opening and sealably through said first seal ring;

a second end extending into said second opening and sealably through said second seal ring, whereby said tube may flex at each end adjacent said openings in the first and second members;

each of said elongate openings closely receiving a substantially length of an end of said tube so that said tube compensates for misalignment while minimizing risk of distortion of said seal rings which might enable them to leak.

2. As in claim 1, wherein one of said seal rings is dynamic.

3. As in claim 2, wherein
said first seal ring is dynamic.

4. As in 2, wherein
said second seal ring is dynamic.

5. As in claim 1, wherein
both of said seal rings are dynamic.

6. As in claim 1, further including:
a bearing lubricant chamber within said hub cap,
a third seal ring carried about said second opening to sealably engage
about said tube inwardly of said second seal opening, and
a vent in said second member located between said second and said
third seal rings connecting said second member's elongated opening to the exterior
of said hub cap.

7. As in claim 1, wherein
said second member is mounted on said hub cap for removal from the
outside thereof.

8. As in claim 1, wherein
said tube is made of fluorocarbon polymer.

Add A2

THE UNIVERSITY OF CHICAGO